

6th Grade Science

Virus Packet

March 16 - April 3



Mrs. Mains

6th Grade Science

Layers of the Earth - 5 days

Khan Academy video on layers of the earth

<https://www.khanacademy.org/science/cosmology-and-astronomy/earth-history-topic/plate-tectonics/v/structure-of-the-earth>

No Glamour Vocab Worksheets *Inside the Earth*

Read pages 65 & 66. Complete pages 69 & 70

INSIDE THE EARTH POSTER! (You can use just a plain white piece of paper.)

Create a poster for yourself that shows a picture of the layers of the Earth. Your poster can look anyway that makes sense to you, but it must have the following requirements:

Must show all layers of the Earth WITH LABELS!

- o Crust (5-70 km thick)
- o Mantle (3000 km thick) Include the Asthenosphere and the Lithosphere
- o Outer Core
- o Inner Core

Include different colors for each layer of the Earth.

Describe the characteristics of each layer of the Earth.

Must include the following vocabulary words, in a sentence, on your poster:

- o Crust
- o Basalt
- o Granite
- o Mantle
- o Lithosphere
- o Asthenosphere
- o Outer Core
- o Inner Core

Must have a title and your name on the poster

NEATNESS COUNTS!!!!

Plate Tectonics - 3 days

Plate Tectonic Webquest

Complete webquest and questions on Google Classroom - remember to make a copy of your paper!

Unit 2 Lesson 1 Earth's Resources in Science Textbook - 7 days

Pages 97-107

1. Complete page 97
2. Read pages 98 & 99, answer questions 5 & 8
3. Watch *Natural Resources* on You Tube: <https://youtu.be/grl3BDSGEC4>
4. Read pages 100 & 101 Answer question 10 & 12
5. Watch video *Underground Resources* on You Tube: <https://youtu.be/OpuHutqS1Lc>
6. Read pages 102 & 103, answer question 15.
7. Watch video *Modern Mining* on You Tube. <https://youtu.be/62-yS0uXBb0>
8. Read pages 104 & 105, answer question 18.
9. Watch *Conservation of Natural Resources* on You Tube: <https://youtu.be/yu1MxNnJtcw>
10. Read pages 106 & 107, answer questions 20 & 21
11. Quizizz - play quizizz for a review of natural resources.
quizizz.com/join/quiz/5e6a9b94d7bcb2001b4304fc/start?from=soloLinkShare&referrer=59baef21c5265c11004c6c0f
12. Complete Lesson 1 Review on page 109

Creative Writing

Look at the following picture and do some research online about conserving our natural resources. Write 1 full page. Discuss what you think this picture means and describe how we can help conserve our natural resources and be better stewards.



7 Inside the Earth

READING PASSAGE

Read the passage silently or out loud for meaning. Think about what you read. Use the Word Attack strategies on page 7 to figure out what the new vocabulary words mean. Then read the passage again.

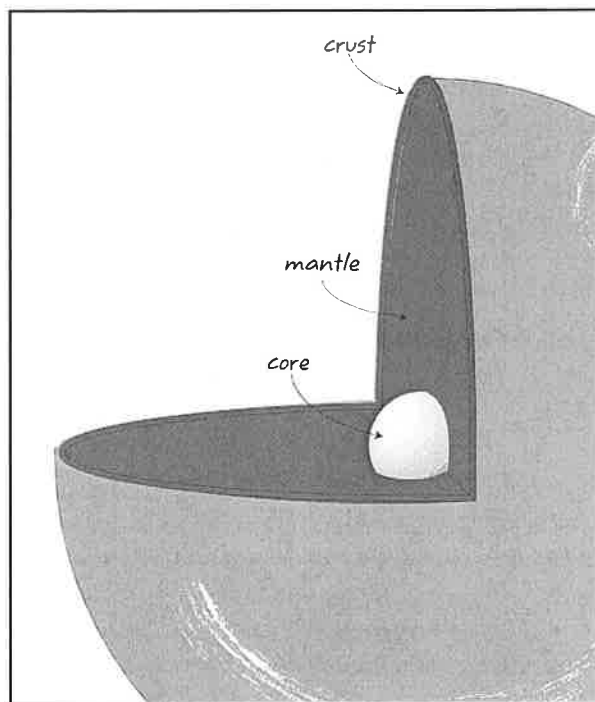
If you were to cut the Earth into halves, what would you find? You would discover that the Earth's layers are much like the layers of a peach. A peach has three layers. They are the skin, the fleshy fruit, and a peach stone. The Earth has three layers too.

The **crust** is the outermost layer. It covers the Earth like a thin skin. Beneath the **crust** is the **mantle**. The Earth's innermost region is the **core**.

The Earth's **crust** has two parts. The **continental crust** makes up the **continents**. It is thick and it consists of a hard **coarse** rock called **granite**. The **oceanic crust** forms the ocean **basins**. It is thin and is made of several kinds of **igneous** rocks. One of these rocks is a black, fine-grained rock called **basalt**.

Less than a third of the Earth's surface is the **continental crust**. The **oceanic crust** makes up about 70.8 percent of the Earth's surface.

The two parts of the **crust** have different thicknesses. The thickness varies from about 3 miles (5 **kilometers**) under the oceans to about 19 miles (31 **kilometers**) under the **continents**. Temperatures within the deepest parts of the **crust** may reach 1600 degrees **F. (Fahrenheit)** or 870 degrees **C. (Celsius)**, hot enough to melt rocks.



Beneath the **crust** is a thick layer of rock and metal called the **mantle**. The **mantle** is about 1,800 miles (2,900 **kilometers**) thick. It is very, very hot. The hot core of the Earth heats it.

The upper part of the **mantle** has a temperature of about 1,600 degrees **F. (870 C.)**. This temperature increases down through the **mantle**. The hottest it gets is about 8,000 degrees **F. (4,400 C.)**

7

Inside the Earth

READING PASSAGE, CONTINUED

The core is the middle part of the Earth. It has two parts. The outer layer starts at 1,800 miles (2,900 **kilometers**) below the Earth's surface. It is about 1,400 miles (2,250 **kilometers**) thick. It is made of melted iron and nickel. Its temperature ranges from about 8,000 F. (4,400 C.) in the uppermost parts to about 13,000 F. (7,000 C.) in the deepest parts.

The inner **core** lies within the outer **core**. It is shaped like a ball. This is the very center of the Earth. The inner **core** rotates more rapidly than the rest of the planet. The center of the inner **core** is about 4,000 miles (6,400 **kilometers**) below the Earth's surface.

Scientists believe the inner **core** is made of solid iron and nickel. It is solid because of the weight of the other layers pushing against it. The temperatures there may be as high as 13,000 F. (7,000 C.)

The study of the Earth is called **geology**. Scientists who study the Earth are called **geologists**. No one has ever dug to the center of the Earth. There is still much to learn about the layers of the Earth.



Inside the Earth

READING COMPREHENSION

Use information from the reading passage on pages 65 and 66 to answer the following questions.

1. What are the two scales we use to measure temperature?

2. What are the three layers of the Earth?

3. What are the two parts of the Earth's **crust**?

4. Name a hard **coarse** rock that is found on the **continental crust**. _____

5. Name a black, fine-grained rock that is found on the ocean **basin**. _____

6. How much of the Earth's surface is the **oceanic crust**? _____

7. How thick is the **mantle**? _____

8. What are the two parts of the **core**?

9. What is the temperature of the inner **core**? _____



Inside the Earth

MATCHING

Match the vocabulary word with the definition that is most correct. Write the letter of the correct word in the blank.

- | | |
|---|--------------------|
| 1. _____ the outer part of the Earth | A. granite |
| 2. _____ the portion of the Earth lying between the crust and the core | B. continental |
| 3. _____ the central part of the Earth | C. oceanic |
| 4. _____ of or relating to one of the seven large land areas of the Earth | D. mantle |
| 5. _____ made up of large parts or particles | E. igneous |
| 6. _____ of or relating to the large body of salt water that covers three-fourths of the surface of the Earth | F. core |
| 7. _____ a hollow place containing water | G. kilometer |
| 8. _____ rock formed by hardening of melted earth | H. coarse |
| 9. _____ a very hard rock that can be polished and is used in buildings and monuments | I. crust |
| 10. _____ a unit of length in the metric system; it's equal to 1,000 meters or about 0.62 miles. | J. geology |
| 11. _____ a scale of temperature in which 0 degrees is the point at which water freezes and 100 degrees is the temperature at which water boils | K. geologist |
| 12. _____ a scale of temperature in which 32 degrees is the point at which water freezes and 212 degrees is the point at which water boils | L. basalt |
| 13. _____ a science that deals with the history of the Earth and its life, especially as recorded in rocks | M. basin |
| 14. _____ a scientist who studies the history of the Earth and its life, especially as recorded in rocks | N. C. (Celsius) |
| 15. _____ a hard, dark volcanic rock that covers the ocean floor | O. F. (Fahrenheit) |

Plate Tectonic Webquest

The following websites will be used in this webquest. Please follow the instructions to complete the webquest.

Site 1: <http://www.enchantedlearning.com/subjects/astronomy/planets/earth/Continents.shtml>

Site 2: <http://pubs.usgs.gov/gip/earthq1/how.html>

Site 3: <http://earthquake.usgs.gov/eqcenter/recenteqsww/>

Site 4: http://www.classzone.com/books/earth_science/terc/content/investigations/es1001/es1001page02.cfm

Site 5: <http://www.tasagraphicarts.com/activities/Plates.html>

Site 6: <http://www.tasagraphicarts.com/activities/TasaGeoCube.html>

Go to site #1:

Observe the diagram to see how the continents drifted to where they are today. You can also see the movement in reverse!

1. Count the major plates. How many are there? _____
2. The theory of plate tectonics (meaning "plate structure") was developed in the 1960's. This theory explains the movement of the Earth's plates (which has since been documented scientifically) and also explains the cause of _____, _____, _____, _____, and many other geologic phenomenon.
3. The plates are moving at a speed that has been estimated at _____ to _____ cm per year. Most of the Earth's seismic activity (_____ and _____) occurs at the plate boundaries as they interact.

Types of Plate Movement

Divergent Plate Movement:

4. _____ is the movement of two oceanic plates away from each other (at a _____ plate boundary), which results in the formation of new oceanic crust (from magma that comes from within the Earth's mantle) along a mid-ocean ridge.

Convergent Plate Movement:

5. When two plates collide (at a _____ plate boundary), some crust is destroyed in the impact and the plates become smaller. The results differ, depending upon what types of plates are involved. (Oceanic and Continental, two Oceanic plates, and two Continental plates)

Lateral Slipping Plate Movement (Transform)

6. When two plates move sideways against each other (at a _____ plate boundary), there is a tremendous amount of friction which makes the movement jerky. The plates slip, then stick as the friction and pressure build up to incredible levels. When the pressure is released suddenly, and the plates suddenly jerk apart, this is an _____.

Plate Tectonic Webquest

7. Click on the **ACTIVITIES ABOUT EARTH'S CONTINENTAL PLATES AND CRUST** and take the **interactive quiz about Plate Tectonics**. Look at the picture to the right. Did you make a 100? _____

Go to site #2 to answer the following questions:

8..An _____ is the vibration, sometimes violent, of the Earth's surface that follows a release of energy in the Earth's crust. In the process of breaking, vibrations called _____ are generated.

9. A _____ is a fracture in the Earth's crust along which two blocks of the crust have slipped with respect to each other. Faults are divided into three main groups, depending on how they move.

10. _____ occur in response to pulling or tension; the overlying block moves down the dip of the fault plane.

11. _____ occur in response to squeezing or compression; the overlying block moves up the dip of the fault plane.

12. _____ occur in response to either type of stress; the blocks move horizontally past one another. Most faulting along spreading zones is normal, along subduction zones is thrust, and along transform faults is strike-slip.

13. The _____ of an earthquake is the depth from the Earth's surface to the region where an earthquake's energy originates (the _____).

14. The _____ of an earthquake is the point on the Earth's surface directly above the focus.

15. Earthquakes beneath the ocean floor sometimes generate immense sea waves or _____ (Japan's dread "huge wave").

16. _____, which happens when loosely packed, water-logged sediments lose their strength in response to strong shaking, causes major damage during earthquakes.

17. _____ triggered by earthquakes often cause more destruction than the earthquakes themselves.

Go to site #3 to answer the following questions:

18. What is the time and the number of earthquakes currents recorded on the map?

Time _____ Number of Earthquakes _____

19. How many earthquakes have occurred within the last hour? _____

20. What was the magnitude of the largest earthquake? _____

Where did it occur? _____

21. Click on the United States on the map. Count how many earthquakes occurred in the U.S. in the last hour, day, and week. _____ hour _____ day _____ week

22. Where do you notice most of the earthquakes occur in the U.S.? _____

Plate Tectonic Webquest

Click "Do You Feel It?" in the left margin. Click on Georgia.

23. List the 3 most recent earthquakes in our region

Location	Date	Time	Magnitude
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Go to site #4. Answer the questions on each slide.

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____

If time allows go to site #5 Have fun placing the tectonic plates in the correct position.

Go to site #6 to play games testing your geologic knowledge!